CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2007-0078
WASTE DISCHARGE REQUIREMENTS FOR:

JUDY BORELLO AND BORELLO SEWAGE TREATMENT FACILITY
POINT REYES STATION, MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Water Board), finds that:

1. Judy Borello (hereinafter called the Discharger) owns and operates the Borello Sewage Treatment Facility, an existing sewage treatment facility located five miles north of Pt. Reyes Station in Marin County. Hereinafter, the Borello Sewage Treatment Facility is called the Borello Ponds or the Ponds.

   The Borello Ponds are a privately owned and operated sewage disposal facility that began operation in 1971 and provides disposal services for a limited number of sewerage haulers within the County of Marin. The discharges regulated by this Order consist of domestic and commercial sewage transported to the facility. The Ponds accept sewage that is trucked from various sources. The sewage is discharged into three treatment evaporation ponds, with stormwater and irrigation runoff collected into a fourth and fifth pond. Disposal is by evaporation and dry weather spray irrigation to a spray irrigation field. In addition, disposal of treated sewage sludge solids is to a designated solids field. This Order prescribes waste discharge requirements for this wastewater system and the associated discharges of waste to land.

PURPOSE OF ORDER

2. The purpose of this Order is to update Waste Discharge Requirements (WDRs) to reflect current conditions, including: 1) updated regulatory requirements; 2) facility improvements, including the addition of aeration pumps, sludge disposal area, and a facility operations and maintenance manual; 3) changes to the groundwater and surface water monitoring programs since WDRs were last updated in 1991; and, 4) correction of small errors in previous orders. It also rescinds previous Water Board Order Nos. 91-182 and 97-080 which are described in Table 1 of this Order. This Order was initiated in response to Water Board staff's evaluation of eleven permitted wastewater treatment facilities in the Tomales Bay Watershed. Tomales Bay and its tributaries have been identified as impaired for nutrients, sediment, and pathogens.

SITE DESCRIPTION AND LOCATION

3. The Borello Ponds are located at 14990 Highway 1 in west Marin County on land within the eastern boundary of the Tomales Bay watershed (Figure 2). Access to the Ponds is from a private drive adjacent to Millerton Gulch Creek on U.S. Highway 1.

4. The Ponds are located in the Millerton Gulch Creek drainage, which is a sub-watershed tributary of Tomales Bay in Marin County. The total 864-acre property is composed of Assessor Parcels: 119-060-13; 119-060-14; 119-060-12; 119-010-08. The ponds, spray field and solid sludge drying fields are located on APN 119-161-12.

5. The Ponds are located on the northern side of Millerton Gulch Creek some 4,000 feet east of Highway 1 (Figure 2). Millerton Gulch Creek is a seasonal stream with a length of about 12,000 feet. The natural site topography of the property varies from flat to steep elevations ranging from Mean Sea Level (MSL) along the west side of the site to nearly 1300 feet above MSL along the eastern boundary. Millerton Gulch Creek is a seasonal tributary to Tomales Bay, providing an important source of freshwater and associated riparian habitat to an estuarine environment.

6. There are at least two other properties on Millerton Gulch Creek owned and run by cattle and dairy ranches that could contribute manure and sediment to the creek. The Giacomini Dairy Ranch is located on the south side of Millerton Gulch Creek. In addition, the Giacomini Ranch includes a significant tributary that drains to Millerton Gulch Creek and enters Millerton Gulch Creek just below where the Borello Ponds' quarry and ponds 1, 2 and 3 are located. The Furlong Beef Cattle Ranch is located on headwaters of Millerton Gulch Creek, to the east and upstream of the Borello Property.

REGULATORY HISTORY

7. Table 1 summarizes the history of Water Board orders affecting the Borello Ponds.

Table 1 Water Board Orders for the Borello Sewage Disposal Facility

Order No.	Date	Purpose	Status
81-056	10/21/81	WDRs Issued for the Wastewater Facility	Rescinded by Order No. 91-182
91-182	06/17/92	WDRs Reissued for the Wastewater Facility	Updated and rescinded by this Order
97-080	8/13/97	Cleanup & Abatement Order (CAO) issued relating to threatened discharge of sewage and requiring corrections.	Updated and rescinded by this Order

8. The wastewater system and discharges regulated by this Order have previously been regulated under WDRs adopted by the Water Board as Order No. 91-182, adopted on June 17, 1992, replacing Order No. 81-056. Order No. 91-182 prohibits the unauthorized discharge of waste from the ponds, and sets minimum freeboard and monthly self-monitoring standards. On August 12, 1997, CAO No. 97-080 was issued for threatened discharges and required corrections. Subsequent corrections were made as required to the self monitoring program and several other small facility operations and maintenance issues (fencing, pond gauges, etc.). This Order prescribes revised requirements for the wastewater system and its use. This Order also rescinds Order No. 91-182 and CAO No. 97-080, and any associated amendments to those orders.

9. In Resolution No. 94-018, the Water Board, as a result of the 1993 Shellfish Protection Act, identified Tomales Bay as an area where the commercial shellfishery is threatened. The Water Board also authorized the formation of a technical advisory committee (TAC) to advise and assist the Water Board in developing an investigation and remediation strategy. Millerton Gulch Creek, which runs through the Borello property, was subsequently identified as an area of high fecal coliform loading in a baywide monitoring study conducted by the Shellfish TAC. The Borello Ponds have been identified as a possible pollutant threat to the shellfish beds due to their proximity to Millerton Gulch Creek. There are also other potential sources of pollutants and fecal coliform in the Millerton Gulch Creek watershed.

10. Tomales Bay and its tributaries have been identified as impaired for nutrients, sediment, and pathogens. The Tomales Bay watershed has been placed on the Clean Water Act 303(d) list; a Total Maximum Daily Load (TMDL) priority list for pathogens was adopted by the Board on September 21, 2005, and subsequently approved by US EPA on January 10, 2007. The basis for the TMDL pathogen listing includes exceedances of the numeric standard for shellfish and recreational uses. Tomales Bay supports the third largest shellfish harvesting area in the State. The waste material at this facility could potentially be a source of nutrients and pathogens to the watershed.

ACCEPTABLE DISCHARGES AND LOCAL AGENCY USE PERMITS

11. The discharges regulated by this Order consist of: 1) domestic and conditional commercial sewage (which includes septage) transported to the facility; 2) treated irrigated wastewater to a designated field; and, 3) sludge solids from the ponds to a designated drying field. Raw sewage is first discharged into one in a series of three treatment evaporation ponds, with stormwater and irrigation runoff collected into a fourth pond. Disposal is by evaporation and dry weather spray irrigation of treated wastewater to a defined disposal field area. Further, disposal of treated sewage sludge solids is to a designated solids field. For purposes of this Order, the irrigation disposal area is the land area where treated wastewater is discharged to land by means of spray irrigation; the sludge disposal area is where solid waste is disposed.

12. The Ponds are a privately owned and operated sewage disposal facility operating under Marin County Use Permit No. 3283, dated January 26, 1979. All sewage haulers using the facility must have a valid permit from the Marin County Environmental Health Services Division (MCEHSD) and have approval from the facility to dispose of sewage at the site. Only the following sources of wastewater may be accepted:

    (a) Sewage from government facilities in the area (e.g., Coast Guard Pt. Reyes Station living quarters);

    (b) Sewage from residential holding and septic tanks; and

    (c) Sewage from commercial establishments that collect domestic waste.

13. The following are sources of wastewater that are not acceptable by this Order:

    (1) No grease trap waste;

(2) No industrial waste;
(3) No commercial waste, with exception of commercial establishments having only domestic waste; and,
(4) No chemical waste, including chemically treated portable toilet waste.

SURFACE HYDROLOGY

14. The discharge facility site is located in the Tomales Bay watershed. The natural site topography varies from moderate to steep elevations ranging from MSL along the west side of the site to nearly 1300 feet above MSL along the eastern boundary. Runoff is fast and the erosion potential is high. Stormwater runoff drains through various drainage ditches and unnamed swales tributary to Millerton Gulch Creek. The natural surface water drainage is to the southwest.

15. The Borello property encompasses one major waterway (Millerton Gulch Creek) and several small drainage courses (Figure 2). Millerton Gulch Creek is located about half a mile to the south of the facility Ponds. All on-site drainages cut through serpentine-derived soils and serpentine bedrock, some exhibiting bedrock pools or step-pool morphology. Millerton Gulch Creek is a USGS Blue-line creek that has been observed as having intermittant (seasonal) stream flow segments with some areas of perennial pooling and spring flows. The remaining drainage courses on the property are several small ephemeral streams all draining into Millerton Gulch Creek. The character of Millerton Gulch Creek varies; in some locations it broadens into alluvial plain up to 150 feet wide. In other areas it is deeply incised with steep banks flattening into the adjoining hillsides in the nature of a gulch. The three primary plant communities present on the property are: riparian; coastal sage scrub; and mixed evergreen forest.

16. The mean annual precipitation for the site is about 33 inches. The 100-year, 24-hour storm event is estimated to be 8.2 inches and the probable maximum 24-hour precipitation, 15.7 inches. The mean annual evaporation is estimated to be 56.4 inches. Actual evaporation at the Borello Ponds is expected to be greater due to hillside wind exposure and use of the aerators.

17. Ponds 1, 2, 3 and 4 are located on a large shelf just above a former rock quarry. The surface drainage design surrounding the ponds flow toward the ponds so that any minor spills are captured. Should a catastrophic event such as an earthquake occur, the former rock quarry basin could be used as containment for Ponds 1, 3 and 4. The estimated containment volume for the quarry is approximately one million gallons (225'x 225'x 2.5'x 7.48gal/ft3).

18. The approximate 8-acre waste irrigation spray field is fenced and contained such that any accidental wastewater spray or stormwater runoff flows into a maintained channel to a sedimentation pond (Pond 4) where it is evaporated or tested and discharged if shown to be uncontaminated stormwater.

19. The 40+ acre dry sludge evaporation field is fenced and contained such that any accidental or unforeseen non-rainy season stormwater runoff is contained by earthen berms and secondary outer ditches, with the majority of ditches leading to an evaporation sedimentation pond (Pond 5).

GEOLOGICAL SETTING

20. The Ponds are located on the northern side of Millerton Gulch Creek some 4000 feet to the east of State Highway 1 in Marin County. The Ponds lie north of Millerton Gulch Creek from a narrow alluvial plain and the former quarry facility area up into steeper slopes. The primary rock historically quarried at the Borello quarry, just downgradient of the ponds, is a basaltic intrusion into chert and greywacke of the Cretaceous Franciscan formation. The rock, while very hard and competent, has been slightly chloritized, hence geologic mappers have characterized it as a greenstone.

21. The Inverness Quadrangle sheet of the Alquist-Priolo Special Studies Zone maps does not show any faults in the immediate quarry and pond area. It does show the San Andreas fault and a subsidiary fault just west of Millerton Point. The map entitled "Map Showing Recent Faulting, Santa Rosa Quadrangle" shows a fault just west of the Highway 1 at Millerton Point which is judged to have been active in the later Quaternary Period (10,000 to 700,000 years ago). Other more detailed geological maps do not indicate geologic faulting in the Quarry and Pond area.

WASTEWATER SYSTEM DESIGN, CONSTRUCTION, AND OPERATION

OVERVIEW

22. The wastewater disposal and treatment facility of Borello Ponds is described below. For purposes of this Order, the disposal and treatment facility is comprised of all equipment and control systems located on the facility site that provide collection, conveyance, treatment, storage and disposal of wastewater. The wastewater disposal and treatment facility includes: three ponds operated in series (one primary wastewater pond, and two aerated wastewater ponds); irrigation runoff/stormwater pond (Pond 4); irrigation disposal area; sludge disposal area; sludge disposal runoff pond (Pond 5); and, all control mechanisms and monitoring equipment. Figure 3 of this Order is a plan drawing of the facility site showing the major components of the disposal and treatment facility. Figure 4 of this Order is a diagram illustrating the wastewater treatment and disposal processes and flows.

23. Wastewater is transported to the site via sewage pumper and hauler trucks. All waste is discharged into Pond 1 and allowed to flow by gravity to Ponds 2 and 3. Runoff during dry weather and from the first winter rains from the irrigation disposal area is collected in a stormwater pond, Pond 4. Runoff to the stormwater pond is reduced via evaporation. During dry weather, undisinfected waste is used to spray irrigate pasture land upslope of the three ponds. The permitted total maximum wastewater flow for the combined wastewater from the facility is 4,844,960 gallons per year. This is the total maximum annual flow allowed by this Order.

WASTEWATER PONDS AND CHARACTERISTICS

24. The wastewater ponds consist of three ponds, each with its own earth-berm containment structure. The ponds provide biological treatment of wastewater via aeration and settling. In addition to treatment, the ponds also provide storage of wastewater and solids during the wet

weather season when disposal to land is not feasible. The perimeter of the ponds is fenced to preclude public access and restrict cattle from entering the area. The berms along each pond are required to have 2 feet of freeboard between the height of the wastewater and the top of the berm. The containment structure, earth berms and pond bottom are required to be relatively impervious, achieved by soil compaction, with a required permeability of less than or equal to 1×10^{-6} centimeters per second. The internal portions of the berms are to be sloped at a horizontal to vertical ratio of about two to one. The area surrounding the treatment pond receiving area has been graded to provide positive drainage toward the disposal pond collection system.

POND DIMENSIONS AND CAPACITIES

25. The available storage capacity is 1,112,380 gallons, with allowance for two feet of freeboard. Pond dimensions and capacities are given below:

	Depth (feet)	Width (feet)	Length (feet)	Surface Area (square feet)	Total Volume (gallons)	Avail Capacity (gallons)
Pond 1	**6**	**63**	**140**	**8,823**	**404,280**	**243,280**
Pond 2	**10**	**55**	**139**	**7,645**	**574,860**	**414,860**
Pond 3	**9**	**65**	**143**	**9,295**	**629,240**	**454,240**
All				**25,760(a)**	**1,608,380(a)**	**1,112,380(b)**

(a) Dimensions and capacities calculated from facility plan drawings.
(b) Pond water depth, with two feet of freeboard remaining. Dimensions from facility plan drawings; capacities from facility 2007 water balance tabulations.

IRRIGATION DISPOSAL FIELD AREA

26. The approximate 8-acre wastewater irrigation disposal field area (irrigation disposal field) authorized for use is located 200 feet uphill and adjacent to the northwest side of Pond 4, as indicated on Figure 4. During dry weather, undisinfected waste effluent is used to spray irrigate pasture land upslope of the three ponds by means of a distribution pipe network and spray irrigation by sprinklers. The irrigation disposal field area is bounded on all sides by grass fields used for cattle grazing. The perimeter of the irrigation disposal field area is fenced in order to restrict cattle grazing and public access in the irrigation fields.

    Discharges of undisinfected effluent to the irrigation area are allowed during the dry weather season, April 1 through October 31. The facility operator should be present during all times while irrigation is being performed. No discharges are allowed during dry weather season if the ground is saturated. Discharges are restricted to times when local wind velocities do not cause any migration of spray aerosols beyond the irrigation area. All sprinklers used in the irrigation disposal area are at an approximate six foot-level, and sprinklers at the edges of the irrigation disposal area are configured to spray only toward the interior of the disposal area.

SLUDGE DISPOSAL FIELD

27. The sludge disposal area (sludge drying fields) authorized for use is approximately 40 acres of grass fields located approximately ¾ of a mile from the Ponds, as indicated on Figure 3. Solid waste produced at the Ponds is taken to a sludge disposal field. Storage or disposal of solid waste on the property is only allowed in the designated area and during the period of May 15 through August 15, unless weather permits and requests are approved by Water Board staff in advance of any storage or disposal outside this period.

OPERATIONS AND MAINTENANCE

28. The wastewater system is operated and managed by wastewater system operators under contract to the Discharger. This Order requires the wastewater system to be operated and maintained by wastewater treatment plant operators that are experienced and knowledgeable about proper wastewater pond system operations, or other similarly qualified and licensed persons. This Order requires the operators to update and maintain an approved Operations and Maintenance (O&M) manual for the facility. This Order also requires the Discharger to establish and maintain a valid contract with a qualified service provider for operation and maintenance of the wastewater system.

WASTEWATER SYSTEM WATER BALANCE COMPARISON

29. Proper operation of the ponds in order to avoid overflows includes use of an Annual Water Balance Comparison. The Annual Water Balance Comparison compares actual and calculated water volumes for the beginning and middle of each month of wet weather (November through March). The pond water volumes can be calculated by a water balance calculation based on incoming sewage, rainfall, spray irrigation amount and evaporation data. Rainfall and evaporation data can be determined from records at the facility site or information recorded at the Pt. Reyes Fire Station or other weather monitoring sources acceptable to Water Board staff. This data can be adjusted, as appropriate, to reflect the climatic conditions at the Ponds. The wastewater system water balance comparison should explain significant discrepancies between actual and predicted pond volumes, and revise as appropriate, the target freeboard capacity levels during the wet season and/or the methods used to guide facility operations.

BASIN PLAN AND RESOLUTIONS

30. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required. The latest version was effective as of December 22, 2006.

31. The Basin Plan provides that all groundwater is considered suitable, or potentially suitable, for municipal or domestic water supply (DOM) and that, in making any exceptions, the

Water Board will consider the criteria referenced in Water Board Resolution No. 89-039, "Sources of Drinking Water", where:

(a) The total dissolved solids exceed 3,000 mg/l (5,000 μS/cm, electrical conductivity), and it is not reasonably expected by the Water Board that the groundwater could supply a public water system, or

(b) There is contamination, either by natural processes or human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using best management practices or best economically achievable treatment practices, or

(c) The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

BENEFICIAL USES OF SURFACE WATER AND GROUNDWATER

Groundwater

32. The site resides within the boundaries of the Tomales Bay watershed, as defined in the Basin Plan. The existing and potential beneficial uses identified for groundwater in this basin, according to the Basin Plan, include:

    a. Domestic (DOM)
    b. Agricultural Supply (AGR)
    c. Freshwater Replenishment to Surface Waters (FRESH)

33. Based on the hydrogeologic characterization and water quality data for the site, groundwater underlying the site qualifies as a potential source of drinking water in accordance with Water Board Resolution No. 89-039. Therefore, all of the above current and potential beneficial uses apply to groundwater beneath the site.

Surface Water

34. Existing or potential beneficial uses identified for surface water in Tomalas Bay, according to the Basin Plan, include:

    a. Water Contact Recreation (REC1)
    b. Non-Water Contact Recreation (REC2)
    c. Ocean Commercial and Sportfishing (COMM)
    d. Industrial Process Supply (PROC)
    e. Industrial Service Supply (IND)
    f. Agricultural Supply (AGR)
    g. Wildlife Habitat (WILD)
    h. Preservation of Rare and Endangered Species (RARE)
    i. Marine Habitat (MAR)
    j. Fish Migration (MIGR)
    k. Fish Spawning (SPWN)
    l. Shellfish Harvesting (SHELL)

CALIFORNIA ENVIRONMENTAL QUALITY ACT

35. The issuance of waste discharge requirements for the subject discharges is exempt from the provisions of Chapter 3 (CEQA), Division 6, Title 14 of the California Code of Regulations, pursuant to Section 15301 (existing facilities) of that Chapter.

NOTIFICATION AND PUBLIC MEETING

36. The Water Board has notified the Discharger and interested agencies and persons of its intent to update waste discharge requirements and has provided them with an opportunity to submit their written views and recommendations.

37. The Water Board in a public meeting heard and considered all comments pertaining to the proposed waste discharge requirements for the site.

IT IS HEREBY ORDERED that Judy Borello (Discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The treatment or disposal of waste shall not create a condition of pollution or nuisance as defined in Section 13050(m) CWC, nor degrade the quality of waters of the State or of the United States.

2. The discharge of waste other than that from domestic sources in the waste treatment system is prohibited.

3. Bypass or overflow of waste to waters of the State from the collection, treatment or disposal system is prohibited.

4. Acceptance of waste is prohibited unless freeboard and capacities required in the Pond Operation Specification's of this Order are maintained.

5. Wastewater received at the facility shall only be discharged directly into Pond 1.

6. No sewage sludge may be disposed which does not receive treatment from Ponds 1, 2, or 3.

7. Wastewater shall not be allowed to flow from the disposal field via surface flow, airborne spray, or surfacing after percolation, to anywhere other than the established channel leading to Pond 4.

8. Discharge of treated wastewater to any land other than the designated irrigated disposal field is prohibited unless authorized in writing by the Executive Officer in accordance with provisions of this Order.

9. Undisinfected wastewater shall only be applied to Irrigation Spray Area 1 from April 1 until October 31, unless written authorization is obtained from Water Board staff expressly permitting an alternative time or activity. Wastewater shall not be applied in advance to any irrigation area during periods of rainfall or when the soils are already saturated.

10. Wastewater irrigation ponding which could provide a breeding area for mosquitoes shall be prevented.

11. The Discharger shall not cause the following conditions to exist in waters of the State or of the United States at any place outside the Ponds:

    a. Surface Waters:

        (1) Floating, suspended, or deposited macroscopic particulate matter or foam;
        (2) Bottom deposits or aquatic growth;
        (3) Adverse changes in temperature, turbidity, or apparent color beyond natural background levels;
        (4) Visible, floating, suspended, or deposited oil or other products of petroleum origin; or,
        (5) Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

    b. Groundwater:

        (1) Degradation of groundwater quality; or
        (2) Substantial worsening of existing groundwater impacts.

12. Migration of pollutants through subsurface transport to waters of the State is prohibited.

B. SPECIFICATIONS

1. Operations and Maintenance Program Specifications

An Operations and Maintenance (O&M) Program is needed in order to ensure that all aspects of the wastewater system are properly operated and maintained. The O&M Program must include descriptions of all wastewater system components and equipment, accurately dimensioned site plans identifying the location of all components and relevant site features (ponds, irrigation field, sludge field, drainage, roads, etc.), recommended strategies and procedures for system operations in accordance with system designs and discharge requirements, maintenance activities, and persons responsible for operation as well as emergency contact information. This Order requires the ongoing development, regular update, and implementation of the O&M Program, acceptable to Water Board staff.

2. Pond Operation Specifications

To prevent the threat of overflows, a minimum freeboard of two (2) feet shall be maintained in Ponds 1, 2 , 3, 4 at all times, except during periods of rainfall that exceed the design ten-year return period rainfall. During any time when the freeboard level is less than two feet, all discharges of wastewater into the pond shall be discontinued immediately. During any time when the freeboard is one foot or less, the Discharger shall implement removal of liquid from the pond(s) by pump truck for haul away to a legal point of disposal and continue such removal until a freeboard level of at least two feet is regained and maintained. In the event of unusually high rain events combined with freeboard levels being at or close to the minimum freeboard, Water Board staff should be notified and measures taken, as listed above, to minimize the chance of pond(s) overflowing.

In addition to each pond having adequate freeboard (two feet minimum), the following are benchmark combined pond system capacities (Ponds 1, 2 and 3), in consideration of annual precipitation, for receiving wastewater over the calendar year. These monthly benchmarks are established to assure that facility capacity is maintained throughout the rainy season. The total available capacity for each individual pond is determined from its respective pond capacity chart. The total available system capacity is determined by combining the capacities for the three individual ponds. The following available wastewater (WW) combined pond system capacities are not to exceed the following limits:

Available WW Capacity (Ponds 1, 2 & 3)	
October 1	996,000 gals.
November 1	996,000 gals.
December 1	956,000 gals.
January 1	801,000 gals.
February 1	692,000 gals.
March 1	532,000 gals.
April 1	436,000 gals.

WW Capacity (Ponds 1, 2 & 3)	
October 1	612,380 gals.
November 1	612,380 gals.
December 1	652,380 gals.
January 1	807,380 gals.
February 1	916,380 gals.
March 1	1,076,380 gals.
April 1	1,172,380 gals.

If the available combined wastewater capacity in the ponds is determined to be above allowable limits, or less than the minimum freeboard of two feet in each pond, then no additional wastewater loads shall be received until the prescribed freeboard capacity is again available. All freeboard measurements and capacity determinations for each week shall be reported in the monthly SMR, along with a notation of any times that the facility is closed due to insufficient freeboard capacity.

3. Pond Cleaning Specifications

The accumulated solids in Ponds 1, 2, and 3 are to be removed, as needed, to assure that the solids accumulation does not exceed 20% of the total pond volume, as determined from measurements made at the end of October each year, prior to the start of the wet weather season. Prior to removal from the Ponds, sludge shall be collected and tested for CAM 17 metals by a State-certified laboratory, and the result submitted to Water Board staff for review and approval prior to disposal. In order to accurately determine future water balances, the dimensions and capacities of Ponds 1, 2, 3, and 4 shall be maintained to no more than the dimensions and

capacities as listed in Finding 25 of this Order. Any significant change to Pond design must be approved by Water Board staff.

4. Reclaimed Wastewater Specifications

a. Undisinfected wastewater may be reclaimed for irrigation in the designated Sprayfield Area 1 (see Figure 4) only during the period from April 1 until October 31, unless written authorization is obtained from Water Board staff in advance expressly permitting an alternative time or activity. Wastewater shall not be applied to any irrigation area during periods of rainfall, threatening rainfall, or when the soils are already saturated.

b. The facility operator should be present at the facility during all times while irrigation is being performed to make sure that all operations are in compliance.

c. Use of reclaimed wastewater under the provisions of this Order shall be limited to irrigation pasture land.

d. Undisinfected wastewater quantity shall be measured before being applied to the irrigation area. Measurements of the quantity shall be taken either by a flow meter at the pump; or by calculating the differences in the remaining pond capacity as measured by the permanent pond staff gauge.

e. Areas irrigated with reclaimed wastewater shall be easily identified with posted notices to the public.

f. Grazing domestic animals (cattle, milk cows, goats, etc.) shall not be allowed into the irrigation area during wastewater application. Sufficient time, at least 30 days, should be provided between application of reclaimed water and grazing by grazing animals to allow the irrigation area to dry thoroughly.

g. Reclaimed water shall be applied so as to minimize accumulation of runoff water in the ditch and storage pond system.

h. Reclaimed wastewater shall be applied to the irrigation area in a manner such that public contact with wastewater is prevented.

i. Discharges are restricted to times when local wind velocities do not cause any migration of spray aerosols beyond the irrigation area.

j. All equipment, including pumps, piping, valves, etc., which may at any time contain waste shall be adequately and clearly identified with warning signs, and the Discharger shall make all the necessary provisions, in addition, to inform the public that the liquid contained is sewage and unfit for human contact.

k. If a quality or use requirement should be violated, the irrigation with reclaimed wastewater shall be terminated immediately, and not resumed until the Discharger has made appropriate corrections of all violations and conditions.

5. Specifications for Sewage Sludge Disposal Area

a. The application of sewage sludge to land shall be limited to the areas shown as Sludge Disposal Area on Figure 3 of this Order, unless written approval is obtained from the Water Board's Executive Officer.

b. Solids from the pond(s) may be disposed in the designated sludge drying pasture area with a slope less than 10%. The Sludge Drying Area shall be maintained with adequate berms to prevent run-off.

c. The maximum amount of sludge which can be applied to soils in the Sludge Drying Area is 3 tons per acre/year. Requests for disposal of volumes greater than this must be justified through an evaluation of sludge characteristics. Approval by Water Board staff must be obtained before additional volumes may be spread.

d. The sludge shall be spread thinly on the land, and disced into the soil as soon as possible thereafter, to a depth of no more than three feet from the ground surface.

e. The sludge shall be applied and tilled into soils at an agronomic rate so as to allow balanced nutrient loading, composting, pathogen and viral breakdown, and to facilitate healthy vegetation in the field.

f. To allow adequate time for breakdown and incorporation of sludge into soils prior to the rainy season, drying and disposal of the sludge solids may occur only after May 15 and until August 15, unless written approval by Water Board staff is obtained in advance.

g. No animals shall be allowed to graze within the sludge application area until wastes have had adequate time for biodegradation and pathogen removal to occur. Fencing to exclude grazing animals around the Sludge Disposal Area shall be maintained during drying periods and maintained for a minimum of one month after the dry season to ensure that there is no transmission of pathogens.

h. One month prior to disposal of the solids, Water Board staff must be notified. The Marin County Environmental Health Services shall also be notified and appropriate County permits must be secured prior to application of sludge.

6. Other Specifications

a. The Discharger shall conduct monitoring activities according to the Self-Monitoring Program (SMP) attached to this Order, as may be amended by the Executive Officer, to verify the effectiveness of the wastewater system including: water balance, groundwater, surface water, leachate, collection, treatment, and removal.

b. At any time, the Discharger may file a written request (including supporting documentation) with the Executive Officer, proposing modifications to the attached SMP. If the proposed modifications are acceptable, the Executive Officer may issue a letter of approval that incorporates the proposed revisions into the SMP.

c. The Discharger shall install any reasonable additional monitoring devices for groundwater, surface water, and leachate required to fulfill the terms of any future SMP issued by the Executive Officer for the wastewater facility.

d. The Discharger shall maintain, inspect, repair, and replace all devices installed in accordance with this Order such that they continue to operate as intended without interruption.

e. Precipitation and drainage control facilities shall be designed with a minimum capacity to accommodate a 100-year, 24-hour storm event.

f. The site shall be protected from any washout or erosion of wastes from inundation, which could occur as a result of a l00-year, 24-hour storm event, or as the result of flooding with a return frequency of 100 years.

g. The ponds and structures shall be constructed and maintained to withstand conditions generated during the maximum probable earthquake.

h. Containment, collection, drainage, and monitoring systems for groundwater, surface water, and leachate, shall be maintained and operated as long as waste is present and poses a threat to water quality.

i. The Discharger shall notify the Water Board immediately of any failure occurring at the facility. Any failure that threatens the integrity of containment or control features or structures at the wastewater facility shall be promptly corrected after approval of the method and schedule by the Executive Officer.

j. Should an accidental or emergency discharge of sewage occur at the facility, the facility operator shall perform additional sampling in Millerton Creek Gulch to assess the magnitude and extent of the release.

k. When there are multiple landowners or lease holders involved, the Discharger shall provide reasonable access to any property it owns or leases at the site to allow for installation, sampling, monitoring, etc., of all devices and equipment necessary for compliance with the requirements of this Order.

l. All reports submitted pursuant to this Order shall be prepared under the supervision of and signed by appropriately experienced or licensed professionals, such as a California registered civil engineer, professional geologist, and/or certified engineering geologist.

C. PROVISIONS

1. The Discharger shall comply with all prohibitions, specifications and provisions of this Order immediately upon adoption.

2. Self-Monitoring Program: The Discharger shall comply with the Self-Monitoring Program (SMP) attached to this Order and as it may be amended by the Executive Officer.

COMPLIANCE DATE: Immediate

3. Report of Waste Discharge: The Discharger shall submit a technical report, acceptable to the Executive Officer, describing any proposed material change in the character, location, or volume of a discharge, or in the event of a proposed change in use or development of the wastewater system [CWC Section 13260(c)]. The technical report shall describe the project, identify key changes to the design that may impact any portion of the wastewater system, and specify components of the design necessary to maintain integrity of the Ponds and prevent water quality impacts. No material changes to any portion of the Ponds shall be made without approval by the Executive Officer.

   COMPLIANCE DATE: 180 days prior to any material change

4. Earthquake Inspection: The Discharger shall submit a detailed Post-Earthquake Inspection Report acceptable to the Executive Officer, in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of the wastewater ponds. The report shall describe the containment features, groundwater monitoring, and control facilities potentially impacted by the static and seismic deformations of any waste management unit. Damage to any waste containment facility, which may impact State waters, must be reported immediately to the Executive Officer, and include a plan and schedule for drainage repair.

   COMPLIANCE DATE: Within 2 weeks of Earthquake

5. Availability: A copy of these waste discharge requirements shall be maintained by the Discharger and shall be made available by the Discharger to all employees or contractors performing work (maintenance, monitoring, repair, construction, etc.) at the facility.

6. Change In Ownership: The Discharger must notify the Executive Officer in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new Discharger. The notice must include a written agreement between the existing Discharger and the new Discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current Discharger and the new Discharger. This agreement shall include an acknowledgment of which Discharger is liable for violations up to the transfer date and which Discharger is liable from the transfer date forward. [CWC Sections 13267 and 13263]

7. Revision: These waste discharge requirements are subject to review and revision by the Water Board. [CCR Section 13263]

8. Termination: Where a Discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Water Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

9. Vested Rights: This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Discharger from liability under

Federal, State or local laws, nor do they create a vested right for the Discharger to continue the waste discharge. [CWC Section 13263(g)]

10. Severability: Provisions of these waste discharge requirements are severable. If any provisions of these requirements are found invalid, the remainder of these requirements shall not be affected. [CWC 9213]

11. Operation and Maintenance: The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. [CWC Section 13263(f)]

12. Reporting of Hazardous Substance Release: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the Discharger shall report such discharge to the Water Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00). A written report shall be filed with the Water Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

13. Entry and Inspection: The Discharger shall allow the Water Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
    d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this order or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. Discharges To Navigable Waters: Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Water Board. [CCR Title 2 Section 223571]

15. Endangerment of Health or the Environment: The Discharger shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive Officer, or an authorized representative, and the California Department of

Public Health (CDPH), Environmental Management Branch, PreHarvest Shellfish Unit, within 24 hours from the time the Discharger becomes aware of the circumstances. In addition, the Discharger shall notify the property owners of the adjacent residential properties and commercial facilities (i.e., oyster farmers) by telephone as soon as the Discharger or Discharger's agent have knowledge of the incident. A written submission to the Water Board and CDPH shall be provided within five days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

16. Document Distribution: Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:

    a. Water Board
    b. Marin County Environmental Health Services
    c. CA Department of Public Health Services (CDPH), Shellfish Unit

    The Executive Officer may modify this distribution list as needed.

17. Duty to Comply: The Discharger shall comply immediately, or as prescribed by the time schedule below, with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. The Discharger must also comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board [CWC Sections 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, and 13350].

18. Requests for Technical Reports: All technical and monitoring reports required by this Order are requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code.

19. Electronic Reporting Format: In addition to print submittals, all reports submitted pursuant to this Order must be submitted as electronic files in PDF format. The Water Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Water Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures & tables. Upon request by Water Board staff, monitoring results, including water level measurements, sample analytical results, coordinates, elevations, etc., shall be provided electronically in Microsoft Excel® or similar spreadsheet format. This format facilitates data computations and/or plotting that Water Board staff may undertake during their review. Data

tables submitted in electronic spreadsheet format will not be included in the case file for public. All electronic files, whether in PDF or spreadsheet format, shall be submitted via the Water Board's file transfer protocol (FTP) site, email (only if the file size is less than 3 MB) or on CD. CD submittals may be included with the print report. Email notification should be provided to Water Board staff whenever a file is uploaded to the Water Board's FTP site.

20. This Order supersedes and rescinds Order Nos. 91-182 and 97-080.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 1, 2007.

Digitally signed by Bruce Wolfe
Date: 2007.11.09 19:07:55 -08'00'

Bruce H. Wolfe
Executive Officer

Attachments:
Figure 1– Vicinity Map
Figure 2– Site Location
Figure 3– Sludge Disposal Area
Figure 4– Pond details
Self-Monitoring Program